REMARKS

This Amendment is fully responsive to the non-final Office Action dated December 10, 2008, issued in connection with the above-identified application. Claims 26-58 were previously pending in the present application. With this Amendment, claims 29, 30, 32-34, 46 and 47 have been amended; claims 26-28, 31, 35-45 and 48-58 have been canceled without prejudice or disclaimer to the subject matter therein; and claims 59 and 60 have been added. Accordingly, claims 29, 30, 32-34, 46, 47, 59 and 60 are now pending in the present application. No new matter has been introduced by the amendments made to the claims, or by the new claims added. Favorable reconsideration is respectfully requested.

In the Office Action, claims 26-36, 40-50 and 52-58 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Chang (U.S. Publication No. 2003/0171931, hereafter "Chang") in view of Nguyen et al. (U.S. Patent No. 6,262,309, hereafter "Nguyen"). Claims 26-28, 31, 35, 36, 40-45, 48-50 and 52-58 have been canceled thereby rending the above rejections to those claims moot. Additionally, the Applicants have amended independent claims 29, 46 and 47 to help further distinguish the present invention from the cited prior art. For example, claim 29 recites the following features:

"[a] standard model creating apparatus for creating a standard model which shows an acoustic characteristic having a specific attribute and is used for speech recognition in an electronic apparatus used by a user, the standard model creating apparatus using a probability model that expresses a frequency parameter showing an acoustic characteristic as an output probability, the standard model creating apparatus comprising:

a reference model storing unit configured to store a plurality of reference models which are probability models showing an acoustic characteristic having a specific attribute; and

a standard model creating unit configured to create the standard model by calculating statistics of the standard model using statistics of the plurality of reference models stored in said reference model storing unit,

wherein said standard model creating unit includes:

a standard model structure determining unit configured to determine a structure of the standard model which is to be created, based on specification information regarding specifications of the electronic apparatus;

an initial standard model creating unit configured to determine initial values of the statistics specifying the standard model whose structure has been determined; and

a statistics estimating unit configured to estimate and calculate the statistics of the standard model so as to maximize or locally maximize a probability or a likelihood of the standard model, whose initial values have been determined, with respect to the plurality of reference models,

wherein the plurality of reference models and the standard model are expressed using at least one Gaussian distribution, and

said standard model structure determining unit is configured to determine a number of statistics of the standard model including at least a number of Gaussian mixture distributions as the structure of the standard model" (Emphasis added).

The features emphasized above in independent claim 29 are similarly recited in independent claims 46 and 47 (as amended). Additionally, the features noted above are fully supported by the Applicants' disclosure (see e.g., pgs. 29-32).

The present invention (as recited in independent claims 29, 46 and 47) is distinguishable over the cited prior art in that a standard model for speech recognition is created in an electronic apparatus used by a user, based on specification information of the electronic apparatus. In other words, the present invention targets a particular electronic apparatus, and creates an appropriate standard model customized for the electronic apparatus. As such, the number of the statistics of the standard model (e.g., the number of Gaussian mixture distributions) is determined with a dependency on the targeted electronic apparatus.

Such a feature of the present invention enables tuning (see e.g., disclosed in claim 59) to be achieved. Specifically, by generating the standard model by changing the number of the statistics of the standard model based on the specification information of the electronic apparatus, a standard model for use in speech recognition (i.e., which allows for quick recognition despite a drop in precision) can be provided to an electronic apparatus that requires quick recognition. On the other hand, a standard model for use in

speech recognition which allows for highly-precise recognition despite taking some time can be provided to an electronic apparatus that requires high-precision recognition.

The present invention (as recited in independent claims 29, 46 and 47) provides the advantage of creating a standard model that allows recognition-precision to be changed depending on the electronic apparatus. No such features or advantages are believed to be disclosed or suggested by the cited prior art.

In the Office Action, the Examiner relies on Chang in view of Nguyen for disclosing or suggesting the features recited in independent claims 29, 46 and 47. Chang discloses a system for creating user-dependent recognition models that are accessible by a user. However, Chang fails to disclose or suggest a system that targets a particular electronic apparatus, or creates an appropriate standard model customized for the electronic apparatus (i.e., the number of the statistics of the standard model such as the number of Gaussian mixture distributions determined with a dependency on the targeted electronic apparatus).

As noted above, the Examiner does not rely on Nguyen for disclosing or suggesting the creation of a standard model. Regardless, after a detailed review of Nguyen, the reference fails to overcome the deficiencies noted above in Chang.

Accordingly, no combination of Chang and Nguyen would result in, or otherwise render obvious, independent claims 29, 46 and 47 (as amended). Likewise, no combination of Chang and Nguyen would result in, or otherwise render obvious, claims 30 and 32-34 at least by virtue of their dependencies from independent claim 29.

In the Office Action, claims 37, 38 and 51 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Chang in view of Nguyen and Junqua (U.S. Patent No. 6,253,181, hereafter "Junqua"); and claim 39 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Chang in view of Nguyen and Junqua, and further in view of Kanevsky et al. (U.S. Patent No. 6,442,519, hereafter "Kanevsky").

Claims 37-39 and 51 have been canceled thereby rending the above rejections to those claims moot.

Finally, new claims 59 and 60 depend from independent claim 29. As noted above the cited prior art fails to disclose or suggest all the features recited in independent claim 29. Accordingly, claims 59 and 60 are distinguishable over the cited prior art at

least by virtue of their dependencies from independent claim 29. Additionally, the features of dependent claims 59 and 60 are fully supported by the Applicants' disclosure (see e.g., pgs. 29-37).

In light of the above, the Applicant respectfully requests that the Examiner withdraw the rejections in the outstanding Office Action, and pass the present application to issue. The Examiner is invited to contact the undersigned attorney by telephone to resolve any remaining issues.

Respectfully submitted,

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